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Measuring surface salinity in the N. Atlantic subtropical gyre. The SPURS-MIDAS cruise, spring 2013

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SPURS-MIDAS (March-April 2013) on board the Spanish R/V Sarmiento de Gamboa was a contribution to SPURS (Salinity Processes in the Upper ocean Regional Study) focused on the processes responsible for the formation and maintenance of the salinity maximum associated to the North Atlantic subtropical gyre. Scientists from Spain, Ireland, France and US sampled the mesoscale and submesoscale structures in the surface layer (fixed points and towed undulating CTD, underway near surface TSG) and deployed operational and experimental drifters and vertical profilers, plus additional ocean and atmospheric data collection. Validation of salinity maps obtained from the SMOS satellite was one of the objectives of the cruise. The cruise included a joint workplan and coordinated sampling with the US R/V Endeavor, with contribution from SPURS teams on land in real time data and analysis exchange. We present here an overview of the different kinds of measurements made during the cruise, as well as a first comparison between SMOS-derived sea surface salinity products and salinity maps obtained from near-surface sampling in the SPURS-MIDAS area and from surface drifters released during the cruise.